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REMOVAL ACTION WORK PLAN
DUTCH BOY SITE
CHICAGO, ILLINOIS

**REMOVAL ACTION WORK PLAN
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CHICAGO, ILLINOIS**

Prepared for
NL Industries, Inc.

Prepared by
ENVIRON Corporation
Arlington, Virginia

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I. INTRODUCTION

On March 26, 1996, the United States Environmental Protection Agency (USEPA) issued to NL Industries, Inc. (NL) a unilateral Administrative Order (Order) under Section 106 of the Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (CERCLA). The Order pertains to the property located at 12000 to 12054 South Peoria Street and 901 to 935 West 120th Street in Chicago, Illinois (the "Dutch Boy Site" or the "Site"). The Order requires NL to investigate Site related contamination, and to conduct appropriate removal action activities to abate what USEPA has concluded is an imminent and substantial endangerment to public health, welfare, or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site. Subsequent to receipt of the Order, NL retained ENVIRON International Corporation (ENVIRON), a division of APBI's Environmental Sciences Group, to implement the removal action requirements specified in the Order.

The scope of work to be performed is specified in Section V.3 of the Order. Section V.3.1 of the Order requires submittal of a draft Work Plan for USEPA approval for performing the removal activities set forth in the Order. Furthermore, Section V.3.2 of the Order requires submittal of a draft Health and Safety Plan for USEPA approval for performing these removal activities. This draft Removal Action Work Plan (RAWP) is submitted by ENVIRON on behalf of NL, consistent with Sections V.3.1 and V.3.2 of the Order. This draft RAWP comprises the following major elements specified in Section V.3 of the Order:

- Site Security Plan
- Sampling and Analysis Plan
- Risk Management Plan.

In addition, requirements for Site health and safety, reporting, recordkeeping, and a preliminary project schedule are included.

The draft RAWP is organized as follows:

- Chapter II. Program Management. This chapter includes an identification and summary of the responsibilities of the Contractor and Project Coordinator as defined in the Order, provides an overview of the Site

Health and Safety Plan, and discusses document retention requirements specified in the Order.

- Chapter III. Scope of Work. This chapter includes a summary of the primary elements of the RAWP as specified in the Order, the intended approach for their implementation, and a summary of reporting requirements.
- Chapter IV. Schedule. This chapter includes a projected schedule for implementation of the RAWP.

II. PROGRAM ADMINISTRATION

A. Contractor/Project Coordinator

ENVIRON will be directly responsible for the overall implementation and timely completion of the RAWP consistent with the requirements of the Order. In this role, ENVIRON will have staff on-site at all times when removal activities are taking place. ENVIRON on-site staff will maintain log books to record general observations, recognition and resolution of problems or unanticipated issues, and subcontractor performance.

Ranjit Machado, P.E. of ENVIRON, the designated Project Coordinator, will manage and coordinate all aspects of the Site evaluation activities, in conjunction with the USEPA On-Scene Coordinator, Edward Hanlon.

B. Health and Safety

Appropriate health and safety procedures will be implemented for all on-site activities described in this work plan. A detailed Health and Safety Plan has been developed by ENVIRON and is provided as Appendix A. The Health and Safety Plan complies with the following regulations:

- U.S. Department of Labor, *Occupational Safety and Health Standards for Construction* (29 CFR 1926).
 - *Lead* (29 CFR 1926.62)
 - *Asbestos* (29 CFR 1926.1018)
- U.S. Department of Labor, *Occupational Safety and Health Standards for General Industry* (29 CFR 1910).
 - *OSHA Hazardous Waste Operations and Emergency Response: Final Rules* (29 CFR 1910.120)
 - *Inorganic Arsenic* (29 CFR 1910.1018)
 - *Lead* (29 CFR 1910.1025)
 - *OSHA Hazard Communication Standard* (29 CFR 1910.1200).

- U.S. Department of Labor, *Recording and Reporting Occupational Injuries and Illnesses* (29 CFR 1904).

Applicability of the Health and Safety Plan will extend to all personnel and visitors to the Site. All personnel and visitors to the Site entering designated areas will be responsible for reading and complying with the Health and Safety Plan and will be required to sign an agreement to comply with the Health and Safety Plan. Subcontractors ultimately will be responsible for the health and safety of their own personnel and representatives and will be required to furnish their own health and safety plan. Subcontractors' health and safety plans, at a minimum, will be required to meet the requirements of the Site Health and Safety Plan provided herein. ENVIRON will provide independent oversight to verify compliance with the Health and Safety Plan and will collect and maintain records related to health and safety matters.

C. Monthly Progress Reports

ENVIRON will provide USEPA with monthly progress reports beginning thirty days after USEPA approval of this work plan. These reports will contain a summary of all work performed, any problems encountered, and any analytical data received during the reporting period. In addition the reports will include a summary of developments expected during the next reporting period, a schedule of work to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

D. Document Retention

All project documentation including field logbooks, visitor logs, analytical data packages, health and safety records, monthly progress reports, waste manifests, regulatory correspondence, work plans and reports will be retained for a minimum of six years. Documents and information retained under this section will be provided at the written request of USEPA. At the expiration of the six year period and at least sixty days prior to the destruction of any document or information retained under this section, USEPA will be notified that such documents and information are available for inspection. Originals or copies of such documents and information will be provided to USEPA upon request.

III. SCOPE OF WORK

A. Site Security Plan

As required by the Order, ENVIRON will develop and submit to USEPA a detailed plan for Site security to mitigate trespassing by unauthorized persons. The Site Security Plan (SSP) will include the installation of a perimeter fence with a locking gate. Signs warning that hazardous materials are present at the Site will also be posted. The fence will serve as the primary barrier against Site trespassing during periods of no Site activity. Fencing specifications will be described in the SSP. If necessary, the plan will also include supplemental security measures to be implemented during periods of Site activity. The SSP will also include provision for documentation of all Site visitors and any other perimeter security matters throughout the implementation of removal activities at the Site.

As specified in the RAWP schedule (Chapter IV), the SSP will be developed and submitted to USEPA within one week after receipt of USEPA approval of the RAWP. Implementation of the SSP will be completed within three weeks after receipt of USEPA approval of the SSP.

B. Sampling and Analysis Plan

A detailed sampling and analysis plan (SAP) will be developed in accordance with the requirements outlined in the Order. Specifically, the SAP will be designed consistent with the Order to: (1) identify the vertical and horizontal extent of on-site soil contamination; (2) determine the background concentrations of lead in the soils in the vicinity of the site; and (3) determine whether lead is present beyond the boundaries of the site and the extent of such contamination.

The SAP will specify the number and location of soil borings to be installed at the Site (and off-site areas), and the analyses to be conducted on samples collected. To design the SAP, ENVIRON will compile and review the following information:

- Reports on previous sampling and analysis conducted at the Site including:

Ecology & Environment, Inc., *Site Assessment Report for International Harvester/Dutch Boy Site*, August 1995. Volumes 1 and 2.

Harza Environmental Services, *Limited Soil Investigation and Paint Sampling*,

Former Dutch Boy Site, June 1994.

Simon Hydro-Search, Inc., *Environmental Assessment Report, 120th and Peoria Streets, Chicago, Illinois*, November, 1993.

Toxcon Engineering Company, *Analytical Results, Phase III - Supplemental Site Investigation, Dutch Boy Paint*, August 1988.

Toxcon Engineering Company, *Analytical Results, Phase III - Site Investigation, Dutch Boy Paint Plant Site*, September 1987.

Professional Service Industries, Inc., *Subsurface Exploration, 120th Street and Peoria Avenue*, July 1987.

Toxcon Engineering Company, *Investigation of the Former Dutch Boy Site, 120th and Peoria Streets*, 1987.

Envirodyne Engineers, Inc., *Immediate Removal Project for Dutch Boy Paint Co./NL White Lead Plant, Chicago, Illinois*, July 1986

- Historical Site information regarding the nature and configuration of lead emissions sources, location of processing operations, material stockpiles and storage areas, storage tanks and pipelines, and any other potentially useful information available.
- Historical information regarding activities conducted at the Site including lead operations, disposal practices, and previous removal/demolition activities. Historical records and depositional testimony will be the primary source of such information.
- Physical Site characteristics including local windrose data, topography, geology and hydrogeology, and the presence of on-site structures, pavement, and other significant physical characteristics.

The SAP will be developed based on a review of Site information and an evaluation of the likely

area of lead impact that may have resulted from Site activities. Ancillary activities (e.g., surveying, management of drill cuttings and other investigation-derived waste) will also be detailed in the SAP.

All sampling and analyses will be conducted in accordance with a detailed Quality Assurance Project Plan (QAPP) that will be submitted as part of the SAP. The QAPP will describe the policy, organization, and functional activities and the data quality objectives and measures necessary to achieve adequate data for use in development of the Risk Management Plan as described below. The QAPP will be consistent with the guidance provided in "*Interim Final Quality Assurance/Quality Control Guidance for Removal Activities: Sampling, QA/QC Plan and Data Validation Procedures*," dated April 1990.

ENVIRON anticipates that a comprehensive SAP, incorporating the above components can be developed and submitted to USEPA by July 3, 1996. As part of the EOC determination, the SAP will also include a methodology for determining background concentrations of lead. The background sampling approach will be developed based on regulatory guidance and the scientific literature, and is intended in determining lead concentrations in soil in an area similar in setting to that in which the site is located.

Upon receipt of USEPA approval, assuming access to sampling areas is obtained, ENVIRON will implement the SAP and will prepare and submit to USEPA an EOC report summarizing the actions taken during this event. The report will include a detailed description of the review of information described previously and present a summary of relevant Site history, the results of previous Site investigations, and a detailed description of the Site's physical characteristics. The report will describe in detail all field activities and present all sampling results conducted as part of the SAP. The report will include figures showing the horizontal and vertical extent of lead in on-site and off-site soils consistent with the objectives of the SAP stated above.

ENVIRON projects that implementation of the SAP and submission of the EOC report can be completed within approximately ten weeks after USEPA issues approval of the SAP. This time frame consists of approximately three weeks to retain subcontractors, schedule and mobilize field crews, complete utility markout, and implement the field sampling program. The schedule assumes a standard 28-day (four week) laboratory turnaround time. Upon receipt of analytical data from the laboratory, at least two weeks will be required for data analysis and validation, and to develop an EOC report consistent with the requirements of the Order. This schedule reflects the first phase of sampling. The results of implementing the SAP may indicate that further sampling is necessary which will require a modification to the schedule.

C. Risk Management Plan

Upon USEPA approval of the EOC report, ENVIRON will develop and submit a Risk Management Plan (RMP) to reduce the risks associated with lead-contaminated soils on-site and off-site. The RMP will include the following major elements:

- Site Description. A detailed description of the Site and surrounding areas will be included in this section of the RMP. The Site description will include a summary of the surrounding land use, identification of potential receptors, topography, geology and hydrogeology, and climatic data.
- Extent of Contamination Summary. A summary of the findings of the SAP and EOC report will be included in this section. Summary figures identifying areas exceeding cleanup goals will be developed and included.
- Identification and Screening of Appropriate Removal Action Alternatives. Various removal action alternatives will be considered for implementation at the Site that will reduce the risks associated with lead-contaminated soils on-site and off-site. In this section, a set of alternatives that are adequately protective of human health will be identified and screened based on consideration of their feasibility and ease of implementation at the Site. A comparison of the screened feasible alternatives will then be made based on their respective costs. Excavation and off-site disposal of soils exceeding the cleanup goal of 1,400 ppm will be considered in the RMP. In addition, various alternatives will be evaluated in the RMP that, in conjunction with other removal activities, achieve protection by limiting access to soils if necessary. Access can be limited by institutional controls or deed restrictions (to the extent that they do not unduly restrict future use), or consolidation and capping, or paving. Risk-based methodologies will be used to ensure that the recommended alternatives are adequately protective.

Based on the screening analysis described above, an appropriate alternative will be selected for implementation at the Site that is cost-effective and protective of human health and the environment, which will be submitted to USEPA along with the RMP. Upon approval of the RMP and the selected alternative by USEPA, the approved alternative to abate the hazards associated with lead-contaminated soils on-site and off-site will be implemented, consistent with the terms of the Order.

- **Implementation Schedule.** Implementation of the RMP will be dependent on the results of the EOC, and the approved alternative to be implemented at the Site. A detailed implementation schedule will be developed and submitted as part of the RMP.

ENVIRON anticipates completion of the RMP eight weeks after USEPA approval of the EOC report.

D. Final Report

At the conclusion of Site activities undertaken pursuant to Sections A-C above, ENVIRON will prepare a final report summarizing the actions taken to comply with the Order. The report will identify the Site, summarize the findings of the SAP, and discuss the selection of an appropriate remedy for the Site as detailed in the RMP. The report will also present a chronology of events, and description of all actions performed under the Order; provide a listing of the resources committed to perform the work; identify all items that affected actions undertaken to comply with the Order; and include a discussion of problem resolution. In addition, a list of quantities and types of materials removed from the Site will be provided along with a discussion of the removal and disposal options considered, and ultimate destination of the materials. Analytical results from all sampling and analyses performed, and all relevant paperwork accrued during the action (manifests, contracts, permits, bills, and invoices) will be included.

The final report will include an affidavit from the person who directed the report preparation. The affidavit will certify under penalty of law that, based on personal knowledge and appropriate inquiries of all other persons involved in the preparation of the report, the information submitted is true, accurate, and complete to the best of the affiant's knowledge and belief. The report will be submitted to USEPA within sixty calendar days of completion of the work required under the Order.

IV. SCHEDULE

A schedule for implementation of the removal activities to be carried out under the Order is provided in Table 1. Because implementation of the removal activities described herein is dependent on USEPA approval of the RAWP, the schedule has been developed using such approval date as a starting point. At various points in the RAWP process, USEPA approval of submittals (viz., Site Security Plan, Sampling and Analysis Plan, Extent of Contamination Report, and Risk Management Plan) will also be required. Where appropriate, the schedule projects the anticipated time frames that will be required for such approvals to be issued. Monthly progress reports will be issued on the last business day of each month following USEPA approval of the RAWP.

It should be noted that the available historical data indicate a very limited area of lead impact as a result of Site activities. The actual extent of contamination and need for further sampling can only be determined following implementation of the SAP. It should be recognized that additional sampling may be indicated from the results of the first phase of sampling, in which case the schedule will be modified to reflect the additional sampling and analysis. No provision has been made in the schedule for further sampling beyond the initial sampling to be prescribed in the SAP. Additionally, the proposed schedule does not account for any delays caused by demolition activities to be undertaken at the Site by the City of Chicago. Because of Site access issues and logistics, such activities should be undertaken prior to implementation of Site activities included in this RAWP. Finally, the schedule is contingent on obtaining the necessary access agreements from appropriate land owners in implementing the SAP.

TABLE 1 Preliminary Schedule of Events Dutch Boy Site Chicago, Illinois	
Task/Event	Date
Develop and Submit Draft Removal Action Work Plan (RAWP)	5/2/96
USEPA Issues Comments on Draft RAWP	5/21/96
Revise and Resubmit RAWP	5/31/96
USEPA Issues Approval of RAWP	6/10/96
Develop and Submit Site Security Plan (SSP) (One Week from Receipt of RAWP Approval)	6/17/96
USEPA Issues Approval of SSP*	6/24/96
Complete Implementation of SSP (Three Weeks from Receipt of SSP Approval)	7/15/96
Develop and Submit Site Sampling and Analysis Plan (SAP)	7/3/96
USEPA Issues Comments on SAP	7/17/96
Revise and Resubmit SAP (Two Weeks from Receipt of USEPA Comments)	7/31/96
USEPA Approves Revised SAP	8/7/96
Complete Implementation of SAP and Submit Report on Extent of Contamination (EOC) (Ten Weeks from Receipt of SAP Approval)	10/16/96
USEPA Issues Comments on EOC Report	10/31/96
Revise and Resubmit EOC Report (Two Weeks from Receipt of USEPA Comments)	11/13/96
USEPA Approves Revised EOC Report	11/20/96
Develop and Submit Risk Management Plan (RMP) (Eight Weeks from Receipt of EOC Report Approval)	1/15/97
USEPA Issues Comments on RMP	2/5/97

TABLE 1
Preliminary Schedule of Events
Dutch Boy Site
Chicago, Illinois

Task/Event	Date
Revise and Resubmit RMP (Two Weeks from Receipt of USEPA Comments)	2/19/97
USEPA Approves Revised RMP	2/26/97
* All subsequent dates are contingent upon obtaining appropriate access agreements.	